



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
23.07.2003 Bulletin 2003/30

(51) Int Cl.7: **G01C 21/20**, G01C 21/26,
G06F 9/38, G06F 12/00,
G06F 17/30, G11B 27/00,
G06T 17/50, G09B 29/00

(43) Date of publication A2:
29.09.1999 Bulletin 1999/39

(21) Application number: **99302263.1**

(22) Date of filing: **24.03.1999**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE
Designated Extension States:
AL LT LV MK RO SI

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(30) Priority: **27.03.1998 US 49747**

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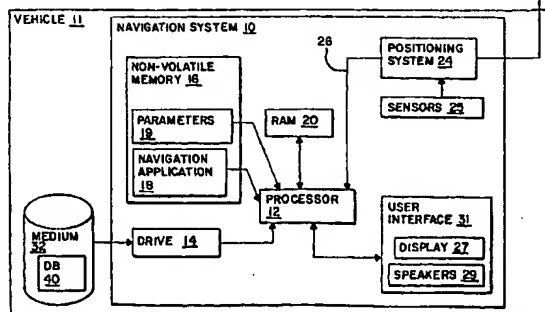
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(54) **Memory management for navigation system**

(57) A method and system for managing memory resources in a system used in conjunction with a navigation application program that accesses geographic data. The geographic data are comprised of a plurality of data records. The plurality of data records are organized into parcels, each of which contains a portion of the plurality of data records, such that the data records in each portion of the plurality of data records that forms each parcel are accessed together. One or more buffers each that forms a contiguous portion of the memory of the navigation system is provided as a cache to store a plurality of parcels. One or more data structures located outside the contiguous portion of memory identify the parcels of data stored in the cache and the locations in the cache at which the parcels are stored. The one or more data structures located outside the contiguous portion of memory in which the parcels are cached are used to manage the parcel cache to use it efficiently. These one or more data structures located outside the contiguous memory in which the parcels are cached are also used to defragment the parcel cache.

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FIG. 1





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EUROPEAN SEARCH REPORT

Application Number
EP 99 30 2263

DOCUMENTS CONSIDERED TO BE RELEVANT			
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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 23 April 2003	Examiner Barel-Faucheux, C
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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EPO FORM 1503 (03-02) (P04021)



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EUROPEAN SEARCH REPORT

Application Number
EP 99 30 2263

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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 23 April 2003	Examiner Barel-Faucheux, C
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.82 (P04001)



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION :

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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LACK OF UNITY OF INVENTION
SHEET B

Application Number
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-24,29

Memory managing system for a navigation system using a cache.

2. Claims: 25-28

Method of organizing a requested parcel queue in a navigation system using a geographic database having a parcel structure.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 30 2263

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82